

Biodiversity, Ecology and Conservation Biology
BIOL 211 – Spring 2018
Sections 03, 04 & 05

Instructor

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Office Hours: Monday 03:00 pm – 05:00 pm, and by appointment

Meeting Time and Place

Lecture: Tuesday and Thursday 12:45 am – 02:00 pm, Harbor Walk West 217

Discussion:

211D-03: Wednesday 2:20 pm – 5:20 pm, Harbor Walk West 305

211D-04: Thursday 2:20 pm – 5:20 pm, Harbor Walk West 305

211D-05: Tuesday 2:10 pm – 5:10 pm, Harbor Walk West 307

Classroom Communications

We will use OAKS for assignments, schedules, announcements, etc. PowerPoint lectures will be posted to the website after they are given. Students are expected to frequently check the course OAKS site. All assignments must be submitted on OAKS' Dropbox, and should not be emailed to the instructor, unless otherwise stated.

Note: This syllabus is subject to change. Please check OAKS for the most recent version.

Course Details

Course Description

This course will be organized under the main theme of Conservation Biology, a field that strives to describe, understand and forecast biodiversity dynamics by applying ecological and evolutionary concepts. During the semester, students will be introduced to three main areas of focus: (1) biodiversity and the study of how groups of organisms are related by common descent, (2) population ecology, (3) interactions among organisms and with their environment at the community, ecosystem and biosphere levels. Students will also explore the motivations for preserving biodiversity, prioritizing choices in conservation and decision-making under conflicting interests, within a human dimension framework. There will be a strong emphasis on understanding the process of science through reading and critical evaluation of the primary scientific literature as well as conducting a research project. Students will be tested on their understanding of the meaning and applications of different concepts through quizzes and exams.

Prerequisites

BIOL 111, BIOL 111L, BIOL 112, BIOL 112L

Co-requisite

BIOL 211D

Learning Objectives

Students will be able to:

1. Develop a strong knowledge about the diversity and relatedness of living organisms, and an understanding of the fundamental concepts in ecology and conservation biology;

2. Discern primary threats to biodiversity and the best approach to tackle a given conservation issue;
3. Apply ecological principles to the conservation of biodiversity;
4. Develop a clear notion of how society shapes conservation efforts, including the forces of economics, policy, ethics, and institutions;
5. Engage in critical thinking and discussion of primary scientific literature and reflect on their applications;
6. Learn to synthesize and work with biodiversity data;
7. Demonstrate skills frequently used by professional biologists: use primary literature, develop scientific questions and hypotheses, use quantitative analyses to evaluate hypotheses, make graphs and communicate science in various formats.

Course structure

The course involves two critical components:

Lecture will introduce students to key concepts in biodiversity, ecology and conservation biology as well as examples of the research involved in developing and testing these concepts.

Discussion will help students develop several practical skills used in science and will introduce the applications of the concepts learnt in lecture.

Materials

Required textbooks: Biological Science 6th edition by Freeman et al.; other required readings will also be available as pdf files placed on the course website.

All assignments will be required to be completed on a word processor or other necessary software (e.g. Excel, PowerPoint, statistical software). All the software needed for this class can be accessed in the College of Charleston computer labs throughout campus. If you do not know how to use any of the applications that is required for the class, you should arrange an appointment with the instructor for tutoring.

In-class group projects may require the use of a laptop in class; if none of your group members has one, you should inform the instructor a week in advance.

Grading

Your grades will be based on the following scheme:

Assessment	Possible points
Lecture:	
- Quizzes	80
- 3 Mid-term exams	220
- Final exam	150
- Attendance, participation and various assignments	50
Discussion:	
- Research project (with various components)	350
- Other activities and assignments	50
Total	900

Letter grade percentage points:

A: 93-100%
A-: 90-92.9%
B+: 87-89.9%
B: 83-86.9%
B-: 80-82.9%
C+: 77-79.9%
C: 73-76.9%
C-: 70-72.9%
D+: 67-69.9%
D: 63-66.9%
D-: 60-62.9%
F: <60

Key dates

Last day of drop/add: Jan 16, to drop with Grade of “W”: Feb 7.

Midterm Exams: Feb 06, Mar 06 and Apr 03

Final Exam: Apr 26 at 12:00 pm – 03:00 pm

Extra Credit

Opportunities for extra-credit will be offered throughout the semester. Specific instructions are posted on OAKS and/or will be announced in class. Students can earn up to 20 points total. Extra credit opportunities are offered to complement the academic goal of the course, rather than in response to student need and will be made available to all students equally.

Course Work Details

Lecture Exams

You will have three midterm and a cumulative final exam. Topics covered in the lecture period and in the assigned readings will be fair game for exams. Format will be mixed and may include: matching, fill-in, multiple choice, short answer and essay. **Be prepared to synthesize ideas**, rather than just regurgitate information. Students will be allowed to submit questions for possible use on the exams. Exams will focus on reasoning, problem solving, interpreting graphs and understanding concepts. To prepare for each exam, a study guide will be provided before each mid-term exam, and review sessions will also be hosted.

Quizzes

Quizzes will help students stay on top of the lecture and reading and will be in the same format as some of the exam questions. These will be administered on OAKS.

Research Projects

Students that hone teamwork skills will be more comfortable with that approach in their careers regardless of field. Each student will join a team of 3-4 students (of their choice) to complete a major research project. This activity involves three main components: (1) identify and generate questions and hypotheses, (2) collect, analyze and interpret data, (3) present scientific information in a written proposal, a research report and an oral presentation. Research projects could incorporate a small field experiment or field sampling, a survey of public attitudes (either characterizing responses post hoc or doing planned comparisons among groups defined a priori), or testing hypotheses using the multitude of online databases available. More details will be posted later.

Article Discussion

The purpose of the journal article discussions is to get students reading primary scientific literature, to let students hone their reading, presentation and critical evaluation skills, and to expose students to a breadth of subjects. Over the course of the semester, students will read several articles, both for lecture and discussion session. Grades for these discussions will be based on attendance, active participation and completion of discussion assignments submitted at the beginning of class, unless otherwise noted.

Assignments

Throughout the semester, students will do several assignments to apply what they have learned

(either as in-class group exercises or individual assignment).

Participation

Both lecture and discussion sessions are interactive; and your participation is expected. Participation (or lack of) will contribute to your grade.

Course Policies

Attendance

Attendance and participation will contribute to your grade. You are expected to attend every lecture; you will learn more by attending and participating in lectures. Attendance to discussion sections is **required** and **mandatory**. Participation on both independent and group aspects will count toward your grade. Although group activities are assessed at the group level, non-participation and unexcused absences or > 2 excused absences from the Discussion section will influence the student's individual grade. If extreme circumstances necessitate an absence, you will be responsible to obtaining the materials and information covered and referred in class during your absences. *Online lecture notes are a supplement, not a substitute for attending lectures.* If you know you will be missing a class, it is your responsibility to inform and make arrangements with the instructor in advance. Make-up or early exams will only be given if you speak with the instructor at least 2 weeks prior to the exam with a valid reason.

Honor Code and Academic Honesty

All students are expected to follow the College of Charleston's Honor Code and Academic Honesty, which covers such matters as plagiarism, cheating and giving or receiving aid on exams. Students can find the complete Honor Code and all related processes in the Student Handbook at <http://studentaffairs.cofc.edu/honor-system/studenthandbook/index.php>. If you have any doubt or questions about how to properly cite or paraphrase a document, it is your responsibility to consult the instructor. While peer-collaboration and exchange of ideas is highly encouraged in this course, all written projects and assignments submitted for a grade must be strictly individual and your own, unless they are part of a collaborative project with multiple authors. Students should be aware that unauthorized collaboration--working together without permission-- is a form of cheating. Research conducted and/or papers written for other classes cannot be used in whole or in part for any assignment in this class, even if the work is revised.

Disability Accommodation

This College abides by section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act that stipulates no student shall be denied access to an education "solely by reason of a handicap." Disabilities covered by law include, but are not limited to, learning disabilities and hearing, sight or mobility impairments. If you have a documented disability that may have some impact on your work in this class and for which you may require accommodations, please see an administrator at the Center of Disability Services, Lightsey Center suite 104, 843.953.1431 and the instructor. If there is a student in this class who has a documented disability and has been approved to receive accommodations through SNAP Services, please set up an appointment to discuss accommodations with the instructor.

Late Work

All assigned work must be turned in by the assigned due time on the respective due date. Work submitted past this time (even on the due date) will have 5% of the total available points

deducted for that day and for each subsequent calendar day, including weekend and holiday days, except in extremely unusual circumstances (advance arrangement required). Zero points will be allocated for an assignment if it is not turned in before the assignment is passed back, discussed in class or key posted.

Classroom Code of Conduct

You are expected to be engaged with the class, demonstrate respect for the course instructor and your peers, to be on time and present for the entire duration of each class session. You can use electronic devices to take notes in class (although, taking by hand is highly recommended) and do the in-class projects, but you should refrain from texting, using social medias, watching videos or doing anything else that would distract you and your classmates from learning.

Email communications

I will respond to legitimate email inquiries from students within 24hours during business hours. Make sure you consult the course syllabus and any information on OAKS for answers BEFORE submitting inquiries by email. Email should NOT be seen as an alternative to meeting with the instructor (or the TA) during office hours. Each email message must include in the Subject line the course identifier and a concise and clear statement of purpose [e.g., BIOL 211: I have a conflict with next test].

Getting help outside of class

All students are encouraged to meet with the instructor during office hours to ask questions. I am always willing to take time to help you better understand the materials. In addition, the Center for Student Learning (<http://csl.cofc.edu/>) offers a variety of helpful resources, including study strategies workshops and tutoring.

Helpful advice to do well in this course:

- Attend class! Stay awake, be attentive and participate
 - Ask questions (to both the instructor and your peers), in class and/or outside of class
 - Take notes, listen, learn and engage during class time. The posted lecture notes are *supplements* to lectures, much of the important content is discussed verbally.
 - Read through your notes regularly, don't get behind.
 - Don't procrastinate: Do the readings ahead of time; Do the assignments/ projects ahead of time
 - Study with a partner or group, and explain concepts to each other
 - Study to understand, not to memorize. Find examples around you, not just from the lecture.
 - Think in a logical way: you will frequently be asked to reason out an answer
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